

Plane Problem of the Theory of Elasticity for
Plates of Variable Thickness, by Yu. P. Kochanov,
154 pp.
RUSSIAN, per, Inzhenernyy Zhur, Vol IV, No 2,
1964, pp 368-375.
JPRS 26417

Sci - Engr

Oct 64

267,898

The Mechanics of Low-Thrust Space Flight, IV,
by G. L. Grodzovskiy, Yu. N. Ivanov, et al.
RUSSIAN, per, Inzhenernyy Zhur, Vol IV, No 2,
1964, pp 392-423.
NASA TT F-9033

Sci-Engr
Oct 64

U.S. GOVERNMENT ONLY

267,564

The Mechanics of Low-Thrust Space Flight,
by G. L. Grodzovskiy, Yu. N. Ivanov, et al, 54 pp.
RUSSIAN, per, Inzhenernyy Zhur, Vol IV, No 2,
1964, pp 392-423.
JPRS 26417

Sci - Engr
Oct 64

267,899

On the Equations of Motion of a Nonequilibrium
Medium Taking Radiation Into Account, by
V. N. Zhigulev, 11 pp.
RUSSIAN, per, Inzhenernyy ~~zhurnal~~, Vol XIV, No 3,
1964, pp 431-438.
CIA/FDD X-5476 *zhurnal*

Sci - Phys
Nov 64

FOR OFFICIAL USE ONLY

269,072

Numerical Solution of Certain Problems
in the Flow of Viscous Fluids, by
L. M. Simoni, 7 pp.
RUSSIAN, per, Inzhen Zhur, Vol IV,
No 3, 1964, pp 446-450. F100064166
FTD-TT-65-1982

Sci - Math Sci
Nov 66

312,908

ON the Theory of Anisotropic Elastic Shells and
Plates, by L. I. Librescu, 13 pp.
RUSSIAN, per, Inzh Zhurnal, Vol IV, No 3, 1964,
pp 475-485.
CIA/FDD X-5525

Sci - Phys
Jan 65

FOR OFFICIAL USE ONLY

272,778

On the Stressed State of an Isotropic Plate, Weakened
by a Curvilinear Hole, by V. M. Gur'yanov,
A. S. Kosmodamyanskiy, 10 pp.
RUSSIAN, per, Inzhen Zhur, Vol IV, No 3, 1964,
pp 486-494.
CIA/FDD X-5539

Sci - Phys
Mar 65
FOR OFFICIAL USE ONLY

275,640

On the Derivation of a Refined Theory
of Plates, by M. P. Sheremet'yev,
B. L. Peleks, 8 pp.
RUSSIAN, per, Inzhen Zhur, Vol IV,
No 3, 1964, pp 504-509. P1100064166
FTD-TT-65-1982

Sci - Materials
Nov 5566

312,909

On Nonlinear Vibrations of a Rectangular Plate
Under the Effect of Random Forces, by Yu. A. Fedorov,
8 pp.
RUSSIAN, per, Inzhen Zhur, Vol IV, No 3, 1964,
pp 527-532.
525 CIA/FDD X-5537

Sci - Phys
Mar 65
FOR OFFICIAL USE ONLY

275,642

Channeled Bodies Streamlined With Flat and Conic
Shock Waves, by V. V. Keldysh, 6pp.
RUSSIAN, per, Inzhenernyy Zhur, Ak Nauk SSSR, Vol IV,
No 3, 1964, pp 539-542. 9695656
FTD-TT-64-1189

Sci - Biol & Med Sci
Jan 65

270,462

Pure Bending of Curved Rods, by K. V. Solianik-Krassa,
5 pp.
RUSSIAN, per, Inzh Zhur, Vol IV, No 3, 1964,
pp 557-560.
CIA/FDD X-5523

Sci - Phys
Jan 65
FOR OFFICIAL USE ONLY

272,776

On the Stability of Rectangular Shallow Shells of
Double Curvature, by B. S. Vasil'kov, L. S. Minaev,
7 pp.
RUSSIAN, per, Inzh Zhur, Vol IV, No 3, 1964,
pp 566-570.
CIA/FDD X-5521

Sci - Phys
Jan 65
FOR OFFICIAL USE ONLY

272,774

NASA-TF-9236
(Government Use Only)
9227192

Determining the Density of a Gas Behind a
Shock Wave From Shadow Photography, by
A. N. Semenov. 18 pp.
RUSSIAN, per, Inzhenernyy Zhurnal, Vol 4,
No 4, 1964, pp 743-750. 9699952
FTD-TT-65-1385

Sci/Physics
Apr 66

298,907

DC

22977

14 May 69 SF

Ion Exchange in a Mixed Bed by V.L.Gogatyrev,

/Russian, book, Ionity v Smeshannom Sloye, Moscow, 1968,
pp 137-207 (Chapter IV) & Table of Cont.

USSR/Sci
repro graphics

Xerox pp in folder- do not mutilate,

T.D. G Jun 69

Ionization of Fast Hydrogen Atoms
in Strong Magnetic Fields, by
Ye. S. Borovik, F. I. Busol, et al.
RUSSIAN, rpt, Ionizatsiya Bystrykh Atomov
Vodoroda v Sil'nom Magnitom Pole, 1964
pp 3-6.
*FTD MT 23-818-67

Sci-Phys
May 67

63-22635

Kurtsin, I. T.
EFFECTS OF IONIZING RADIATION ON THE
DIGESTIVE SYSTEM. 1963, 332p
Order from American Elsevier Publishing Co., Inc.,
52 Vanderbilt Ave., New York, 17, N. Y., \$16.00

Trans. of mono. [Ioniziruyushchaya Radiaitsiya i
Pishchevarenie, Leningrad, 1961, 297p].

DESCRIPTORS: *Radiation effects, Radiation injuries,
*Gastrointestinal system, Therapy.

Biological Sciences--Radiobiology, TT, v. 10, no. 12

- I. Kurtsin, I. T.
- II. American Elsevier
Publishing Co., Inc.,
New York
- III. Scripta Technica, Inc.,
Washington, D. C.

Office of Technical Services

S-900/61

The Effect of Ionizing Radiations on Vitamins in
Complex Systems, by G. D. Berdyshev, 14 pp. (NY-6853)

RUSSIAN, bk, Ioniziruyushchiye Izlucheniya i
Vitaminy, 1960, pp 39-49.

*JPRS 12310

Sci - Med

11 Dec 61

. 182, 186

S-900/61

Towards the Problem of Rational Vitamin Therapy
of Radiation Sickness, by G. D. Berdyshev, 8 pp.
(NY-6853)

RUSSIAN, bk, Ioniziruyushchiye Izlucheniya i
Vitaminy, 1960, pp 119-125.

JPRS 12310

Sci - Med
11 Dec 61

182,187

(DC-5393)

Electronically Controlled Electric Drive of
Continuous Rolling Mills, by S. N. Veshenevskiy,
12 pp.

RUSSIAN, rpt: Elektricheskiy Privoz Nepreivnykh
Prokatnykh Stanov, pp 1-6.

JPRS 8925

Sci - Engr
Oct 62

171,678

S-5232

(DC-2601).

Conclusions From "Ionic Mechanisms of the Basic
Nerve Processes," by G. Yu. Belitskiy, 10 pp.

RUSSIAN, bk, Ionnnye Mekhanizmy Osnovnykh
Nervnykh protsessov, 1958, Leningrad, pp 152-160.

JPRS-L-1871-D

Sci - Med.
Sep 59

97,686

The Application of Ion Exchange Resins in
the analysis of Chrome Electrolyte of Chrome
Plating Solutions, by A. A. Morozov, et al,
RUSSIAN, rpt, Ionobmennyye Sorbenty v Promy-
shlenosti AN SSSR Institut Fiz. Khim, 1963,
pp 144-152.
MLL RTS 2865 (On Loan or Purchase)

Sci-Chem
1963

321,448

Liquid ion Exchange Resins, by
V. K. Laskorin.
RUSSIAN, bk, Ionobmen. Sorbenty v
Problemykh Izdatel Akad Nauk SSSR.
Moscow, 1963, 243 pp., Partial
Translation pp 48-59.
RHH 9-26-64

Sci-BGM
Jul 65

286,169

ITEMS FROM ION-EXCHANGE HIGH-MOLECULAR WEIGHT
COMPOUNDS, BY K. M. SILDADZE, A. V. PASHKOV, ET AL,
17 PP.

RUSSIAN, BK, IONOBYMENNYE VYSOLOMOLEKULYARNYYE
SOYEDINENIYA, MOSCOW, 1960, PP 3-4, 203-216

JPRS 223805

SCI-CHEM
DEC 63

244,191

Characteristics of Ion Exchangers and Ion
Exchange Membranes, by K. M. Saldadze, A. V.
Pashkov and V. S. Litov, 54 pp.
RUSSIAN, bk, Ionobmennyye Vysokomolekulyarnyye
Soyedineniya, 1960, pp. 107-157.
JPRS 40869

USSR

B&M

June 67

323,572

Effect of the Ionization Process on the Initial
Radius of a Meteor Tail, by V. D. Oksyuk.
RUSSIAN, bk, Ionosfera i Meteority, IGY Program,
Section V, No 2, 3, 1963, pp 34-36.
NASA TT F-8658

Sci-Ear Sci & Astron

May 64

U.S. GOVERNMENT ONLY

257,520

Measurement of the Drift of Ionization Irregularities
in the E-Region of the Ionosphere at Simultaneous
Control of Reflected Radiowaves' Polarization, by
B. L. Kashcheyev, V. I. Taran.
RUSSIAN, bk, Ionosfera i Meteority, IGY Program,
Section V, No 2, 3, 1963, pp 37-42.
NASA TT F-8662

Sci-Ear Sci & Astron
May 64

U.S. GOVERNMENT ONLY

257,507

Air Ionization and Its Hygienic Importance, by
A. A. Mekh. UNCLASSIFIED

RUSSIAN, bk, Ion-Zatatsiya Vozdushn i ee Gigienicheskoe Znacheniye, 1958, Moscow,

Navy 2397/OHI 628

Sci - Med
Mar 60

109,483

From, of Genll.

RUSSIAN, bl. from, Moscow, 1958, pp 1-8. (Call
to RIV 343020, Eng Mr)

AMS

ME/A - from
Geo
Jan 60

106,224

IRKUTSK, BY V. I. FRIDMAN.

RUSSIAN, BK, IRKUTSK, X 1961, PP 1-86.

JPRS 18476

USSR
GEOG
APR 63

226,490

The South (The Irkutsk-Cheremkhova Region).

RUSSIAN, bk, Irkutskaya Oblast (Ekonomiko-
Geograficheskaya Kharakteristika), 196~~A~~, pp 138-162.

2

(WACSI I-3503-B
ID 2246309

USSR
Geog, Econ
Oct 53

The Northwest -- The Bratsk-Ilimsk Region (Central
Angara Area).

RUSSIAN, bk. Irkutskaya Oblast (Ekonomiko-
Geograficheskaya Kharakteristika), 1962, pp 174-X-218.

(*ACSI I-3508-C
ID 2246309

USSR
Geog
Oct 63

The Northeast -- Leno-Vitinsk Region.

RUSSIAN, bk. Irkutskaya Oblast (Ekonomiko-
Geograficheskaya Kharakteristika), 1962, pp 219-237.

*ACSI I-3508-D
ID 2246309

USSR
Geog. Econ
Oct 63

Irkutskaya Oblast', Short Economic Geographical
Review, by V. A. Krotov, 3 pp.

RUSSIAN, rpt, Irkutskaya Oblast', Kratkiy
Ekonomiko-Geograficheskiy Obzor, 1960. (ABSTRACT
ONLY)

ACSI I-4974
ID 2204024364

USSR
Geog, Econ
Sep 64

Investigation of Automation of Hull Construction
Work by Digital Control System, Report No 1.
Digital Control System of Mould Lifting Work,
by T. Yana.
RUSSIAN, per, Ishikawajima-Harima Gihon, Vol 3,
No 12, 1963, p 55.
NLL 9022.065 (2312)

Sci-Ingr
Nov 67

345,209

Synthetic Abrasives: The Crystallization of
Corundum, by M. V. Kamentsev, 12pp
RUSSIAN, per, Iskusstvennye Abrazivnye
Materialy Osnovy Tekhnologii, 1950, pp 67-71
OTS TT-64-19548

Sci - Mat
June 67

327,447

Bioelectrical Phenomena in the Cortex of the
Larger (Cerebral) Hemispheres, by A. I.
Roitbak, 475 pp.

RUSSIAN, ^{kk} I. S. Beritashvili. Institute of
Physiology, the Acad of Sciences of the Georgian
SSR, 1955, pp 240 pp.

SLA Tr R-92a

Biology
Sci - ~~Physiol~~
Apr 1957

46,176

Jan 1457

(SF-1813)

The Minerals of Dzungaria, by V. A. Obruchev,
93 pp.

RUSSIAN, bit, Iskopaemyye Bozhatstva Pogranichnoy
Dzhungarii, 1932, pp 1-68.

JPRS 4762

Sci. - M/Metals

Aug 61

16² 033

THE EFFECT OF HYPOTHERMY ON THE MORPHOLOGICAL
AND PROTEIN COMPOSITION OF THE BLOOD OF
IRRADIATED ANIMALS, BY CH. I. BJRSHEYN,
T. G. MANKU, B. I. KINEL', ET AL, 5 PP.

RUSSIAN, BK, ISKUSSTVENNAYA GIPOTERMIYA,
TASHKENT, 1961, PP 21-24.

JPRS 17262

SCI - MED

JAN 63

220,459

)SF-2132)

THE SIGNIFICANCE OF AND PROSPECTS FOR THE USE
OF HYPOTHERMIA IN DIFFERENT FIELDS OF MEDICINE,
BY I. R. PETROV, YE V. GUBLER, 13 PP.

RUSSIAN, BK, ISKUSSTVENNAYA GIPCTERMIYA,
1961, PP 180-193.

JFRS 12522

SCI - MED
MAR 62

183,153

S. S. Bryukhovenko, The Initiator of Artificial
Blood Circulation, by A. G. Lapchinskiy, 8 pp.
RUSSIAN, bk, Iскусственное кровообращение,
1964, pp 6-12.
JPRS 29628

Sci-B/M
Apr 65

278,914

S-253/54

The Soviet Artificial Kidney, by A. Ya. Bytel'.
(SF-3040)

RUSSIAN, bk, Iskusstvennaya Pochka i Yego Klinicheskoye
Primeneniye, v.1961, pp 148-151.

Bytel'
*JPRS

Sci - Biol & Med Sci
March 64

Iskusstvennoye Zhidkoye Toplivo, I, Gidrogenizatsiya
Topliv, Gostoptekhizdat, 1949 (332 pp), pp 128-140 and
244-246

I. B. Rapoport, Effect of Catalysts on the Hydrogenation
of Coals and Other High-Molecular Products, With
Particular Attention to USSR Crude Materials Available
for Hydrogenation.

Prig. 8583

L. M. Bl.

Certain Technological Processes of Hydrogenation of
Highmolecular Products, by I. B. Rapoport, 5 pp.
UNCLASSIFIED

RUSSIAN, bk, Ishusstvennoe Zhidkoe Toplivo.
Gidrogenizatsiya Topliva, (Synthetic Liquid Fuel),
Part I, Hydrogenation of Fuels, 1949, pp 213-217.

ATTC F-T3-8197

Scientific - Chemistry, fuels
CES/DEX
ATTC 82384A
CIA 2311176

955.2

Rapaport, I. B.
CHEMISTRY AND TECHNOLOGY OF SYNTHETIC
LIQUID FUELS, 2D REV. ED., tr. by M. Shelef and
P. Schaertl. 1962, 424p. 302 refs. PL-480 Int.
Order from OTS \$4.25 61-31075

Trans. of mono. Iskustvennoe Zhidkoe Toplivo,
Khimiya i Tekhnologiya, 2d rev. ed., Moscow, 1955
[546p.]:

DESCRIPTORS: *Fuels, Liquids, Synthesis, Coal,
Hydrogenation, Catalysts, Phase studies, Heat of reac-
tion, Hydrocarbons, Petroleum, *Gasoline, Organic
materials, Coal gas, Mineral oils, *Chemical
engineering, Textbooks.

The book deals with the following problems of chemistry
and technology of synthetic liquid fuels: destructive hy-
drogenation of solid and liquid fuel; conversion of hy-
drogenation products into high-quality liquid fuel;
(Engineering-Chemical, TT, v. 9, no. 7) (over)

61-31075

- I. Rapaport, I. B.
- II. Title: Synthetic...
- III. PL-480 Int (61-31075)
- IV. National Science
Foundation, Washington,
D. C.

Office of Technical Services

Artificial Satellites - The Triumph of K. E.
Tsiolkovsky's Ideas, by I. A. Merkulov, 86 pp.

RUSSIAN, lit., Izvestnyye Sputniki - Trazhenie
Idey K. E. Tsioolkovskogo, Series IV, No 8-9, Moscow,
1958, 71 pp.

AZIK 8-10-1970/4

Sci - Space Res
Apr 59

85,020

Artificial Earth Satellites in a Rarefied Plasma,
by Ya. L. Al'pert, A. V. Gurevich, et al.
RUSSIAN, bk, Iskusatvennyye Sputniki v Razrezhnoy
Plazme, Moscow, 1964, 382 pp.
*NASA TT F-8071

9

Sci-Aero
Aug 64

U.S. Government Only

DC-1275

Artificial Satellites of the Earth, by
Ario Abramovich Shternfeld, 165 pp. UNCLASSIFIED
RUSSIAN, bk, Iskusstvennyye Sputniki Zemli,
Moscow, 1956, pp 1-180.

US JPRS/NY Rpt 191

Sci - Space Research
Mar 58

59,637

Space Housing, by Va F. Zigol', 3 pp.

RUSSIAN, bk, M: Iskussetvennyy sputnik zemli,
1956, pp 53-76.

AP 1175829

Sci - Space Res

Sep 5 8

72,984

Artificial Earth Satellites, by N. A. Varvarov,
29 pp.

RUSSIAN, *Iskusstvennyye Sputniki Zemli*, 1957,
pp 1-16. 9660225

(
ATIC F-TS-9950

Sci

Apr 61

149,400

1958

ISKUSSTVENNYE SPUTNIKI ZEMLI
(Artificial Earth Satellites -
3 issues/year)

Translation of 1958 up to and
including 1963, Vols. 1-6
In bookform as "Cosmic Research".
From 1964, see: "KOSMICHESKIE
ISSLEDOVANIYA"

Order from: Plenum Publishing Corporation
227 West 17th Street
New York, N.Y. 10011

1963: \$ 50.00/year
\$ 30.00 single issues
\$ 15.00 single article reprints
add \$ 5.00 on overseas subscription

Russ
old

Petrov, V[iktor Pavlovich].
ARTIFICIAL SATELLITES OF THE EARTH. [1961]
298p. refs.
Order from GB \$9.50

Trans. of mono. [Iskusstvennyi Sputnik Zemli, Moscow,
1958].

Another translation is available from LC or SLA
mi\$11.10, ph\$47.10 as 60-13296, F-TS-9871/V.
Also available in part (p. 157-166, 202-205, 278-280)
from OTS \$0.50 as 59-11960 [1959] 12p.

DESCRIPTORS: *Satellite vehicles, *Satellite vehicle
research, Bibliography, USSR.

(Engineering--Satellite Vehicles, TT, v. 6, no. 6)

61-25104

I. Petrov, V. P.
II. Gordon and Breach,
Publishers, Inc.,
New York

176737

Office of Technical Services

Popular Science Library; Earth-Satellites,
by V. Petrov, 300 pp. UNCL

RUSSIAN, bk, STIskustvennyy Sputnik Zemli,
Moscow, 1958, 306 pp.

ATIC P-73-9871/V
AP 1187424 -- pp 206-221

Sci - Space Res

Telecom IC 11638

ATIC notified of ACSI H 2523

Aug 59

94, 955

Artificial Satellites, by A. Shternfel'd, 424 pp.
UNCLASSIFIED

RUSSIAN, bk, Ishusstvennyye Sputniki, Moscow,
1958, 300 pp. CIA 613362 V

OTS PR-351 T-20
ATTC F-TS-9570/V

Sci - Space Res
Jan 56

73 425

(Enclosure)

Military Application of Space Vehicles, by
V. P. ... 1 PP. USCL

RUSSIAN: ... Iskhodovskiy Sputnik Zemli, Moscow,
1958, PP 9, 29-30, 31, 32, 34, 229-254.

AF 1187421

Sci - Space Res
Feb 59

79,986

The Artificial Earth Satellite, by V. Petrov,
11 pp.

RUSSIAN, bk, *Iскусstvennyy Sputnik Zemli*, Moscow,
1958, pp 157-166, 202-205, 279-280.

ACSI, E-2523

Sci - Space Res

Feb 59

81,524

PROVISION FOR Vital Conditions of Artificial
Earth Satellites, by V. Petrov, 11 pp.
USSR.

RUSSIAN, in: Izvestiya Sputnik Zemli,
Moscow, 1958, pp 205-221.

AF 1187424

341 - Space Res
Feb 59

79,984

62-14012

Vernov, S. N., Vakulov, P. V. and others.
INVESTIGATION OF THE SOFT COMPONENT OF
COSMIC RAYS BEYOND THE LIMITS OF THE AT-
MOSPHERE (Izucheniye Myagkoi Komponenty Kos-
micheskikh Luchei za Predelami Atmosfery). [1962]
[20]p. (foreign text included).
Order from OTS or SLA 51.60

62-14012

Trans. of Iskusstvennye Sputniki Zemli (USSR) 1958
[v. 2] p. 61-69.

DESCRIPTORS: *Satellite vehicle research, *Radi-
ation counters, *Photons, *Cosmic rays, Gamma rays,
Electrons, Solar radiation.

(Astronomy--Astrophysics, TT, v. 8, no. 9)

1. Title: Sputnik III
- I. Vernov, S. N.
- II. Vakulov, P. V.

Office of Technical Services

Artificial Earth Satellites

RUSSIAN, bk (?), Iskusstvennye Sputniki Zemli, No 1,
Rezul'taty Nauchnykh Issledovaniy, Provedennykh po
Programme rgg pri Pomoshchi Pervogo i Vtorogo
Iskusstvennykh Sputnikov Zemli

T of C being held by Dollie *To: [unclear]*
various sections already available
1 Jul 1959

Artificial Earth Satellites, Edited by L. V.
Kurnosova, 236 pp.

RUSSIAN, bk, Iskusstvennye Sputniki Zemli,
Vol I, 1958.

Plenum Press
227 West 17th St
New York 11, New York

Sci - Space Res

Mar 60

Determination of the Density of the Atmosphere
According Observed Braking of the First AES,
by M. L. Lidor

RUSSIAN, bk, Iskusstvennye Sputniki Zemli, No 1,
1958, pp 9-20

IGY 35

Determination of the Density of the Upper
Atmosphere According to Secular Changes in the
Elements of the Orbit of the First Two AES, ~~1958~~
P. Ye. El'yasberg

RUSSIAN, bk, Iskusstvennye Sputniki Zemli, No 1,
1958, pp 21-24

IGY 35

The Motion of an Artificial Earth Satellite
Relative to its Centre of Mass, by V. T.
Belitskiy. UNCL

RUSSIAN, part, Ikhosstevennye Sputniki Zemli,
1958, pp 25-43.

RAE-824

Sci - Space Res
Jan 60

105,772

Utilization of the Doppler Effect for Determining
the Orbital Parameters of AES's by V. A. Kotel'-
nikov, V. M. Dubrovin, V. A. Morozov, O. N. Rzhiga,
A. M. Shakhovskoy, B412

RUSSIAN, bk, Iskusstvennye Sputniki Zemli, No 1,
1958 pp 50-61

JPRS/DC-287
146-60
100/50-61 7/5/61

Rocket Measurements of the Electron Concentration in the Ionosphere Using the Ultra Short Wave Dispersion Interferometer, by K. I. Gringauz

RUSSIAN, bk, Iskusstvennye Sputniki Zemli, No 1, 1958, pp 62-66

JPRS/DC-L-1207

JPRS/51.4 T 2130

Distribution of Electron Concentration With
Altitude According to the Data of Experiments
With Rockets and AES's and its Effect on the
Propagation of Radiowaves, by, L. A. Zhekulin

RUSSIAN, bk, Iskusstvennye Sputniki Zemli, No 1,
1958, pp 67-79

JPRS/DC-L-1207

JIB/S.I.4 T 3/50

Research on the Flight of a Living Creature in an
Artificial Earth Satellite, by V. M. Chernov,
V. A. Yakovlev, 7 pp. USSR

ROSSIA, 1958, Tekhnicheskyye Sputniki Zemli,
No 1, Moscow, 1958, pp 80 - 94

American Rocket Society Journal
Oct 1959, Vol XXIX, No 10, Part I

100,702

Sci - Space Res
Nov 59

Artificial Earth Satellites

RUSSIAN, bk (?), Iskusstvennye Sputniki Zemli, No 2,
Rezul'taty Nauchnykh Issledovaniy, Poluchennye pri
Pomoshchi Tret'yego Iskusstvennogo Sputnika Zemli

T of C being held by Dollie
various sections already available
x 1 Jul 59

Dynamic Effects in the Motion of AES's, by L. I.
Sedov

RUSSIAN, bk, Iskusstvennye Sputniki Zemli, No 2,
1958 pp 3-9

JPRS/DC-287

*Plenary paper, Science
Vol 1, No 3, July 61
A. Sedov*

Measurements of Thermodynamic Parameters of the
Stratosphere With Aid of Meteorological Rockets,
by E. G. Shvidkovskiy, 3 pp. USSR

VOSEIM, part, Issledovaniye Spatniki Zemli,
No 2, Moscow, 1958, pp 10-16.

American Rocket Society Journal
Oct 1959, Vol XXIX, No 10, Part I

Sci - Geophys
Nov 59

100,701

Disturbances of Gas Environment Caused by Satellite
Flight, by B. A. Mirtov, 9 pp. UNCLASSIFIED

152, 702, PP 17-26
RUSSIAN, papers presented at Moscow Conference of
CSAGI, Moscow, 1-2 Aug 1958.

US JPRS/DC-287

Sci - Geophys

JET Propul Lab 2

CIA-9044703

Dec 58

FDD X 3844

Preliminary Results of Determination of
Atmospheric Density Above 100 Kilometers, by
V. V. Mikhnevich, 10 pp. UNCL

RUSSIAN, per, Iskusstvennyye Sputniki Zemli,
No 2, 1959, pp 26-31.

US JPRS/DC-287

AP 1231316

Sci - Geophys
Sep 59

96, 263

Soviet Investigations of the Atmosphere Using
Rockets and AES's, by V. I. Krasovskiy

RUSSIAN, bk, Iskusstvennye Sputniki Zemli, No 2,
1958, pp 36-49

AF 1231316

*Planetary & Space
Vol 4, No 2, 1961
Pergamon Press*

Preliminary Report on Geomagnetic Measurements
Carried Out With the Aid of the Third Soviet
Artificial Earth Satellite, by S. Sh. Dolginov,
L. N. Zhurgov, N. V. Pashkov, 3 pp. UNCL

RUSSIAN, per, Izvestiennyye Sputniki Zemli,
No 2, 1959, pp 50-53. (papers presented at Moscow
Conference of CSAGI, Moscow, 1-9 Aug 1958)

UB JPRS/DC-287

AF 1231316

Sci - Geophya
Sep 59

96,359
V. N. 3, 1959
1959

Micrometeorite Studies Using Rockets and Satellites,
O. D. Komissarov, T. M. Nazarova, L. N. Neygodov,
S. M. Polonkov, L. Z. Rusakov, 3 pp. UNCL

RUSSIAN, per, Iskusstvennyye Sputniki Zemli, No 2,
1959, pp 54-58. (papers presented at Moscow
Conference of CSAGI, Moscow, 1-5 Aug 1958).

AF 1231316

US JPRS/DC-187

Sci - Geophys
Sep 58

96,251

Detection of Corpuscles With the Aid of the
Third AES, by V. I. Krasovskiy, Yu. M. Kushnir,
G. A. Bordovskiy, G. F. Zakharov

RUSSIAN, bk, Iskusstvennyye Sputniki Zemli, No 2,
1958, pp 59-60.

SLA 60-21044

JPRS/DC-287

*Pls. May 9, 1961
Vol 4, 403 p. 61
Bureau Files*

Study of the Soft Components of Cosmic Rays
Beyond the Limits of the Atmosphere, by
S. N. Vernov, P. V. Vakulov, Ye. V. Gorchakov

RUSSIAN, bk, Iskusstvennyye Sputniki Zemli, No 2,
1958, pp 61-69

JPRS/DC-287

Heavy Nuclei in Primary Cosmic Radiation, by
I. V. Kurnosova, L. A. Razorenov, M. I. Fradkin

RUSSIAN, bk, Iskusstvennye Sputniki Zemli, No 2,
1958, pp 70-74

JPRS/DC-287

Solar Batteries, ^{by} V. S. Vavilov, A. P. Landsman,
V. K. Subashiyev

RUSSIAN, bk, Iskusstvennye Sputniki Zemli, No 2,
1958, pp 75-80

JPRS/DC-287

Acoustical Method of Measuring the Mechanical
Parameters of Meteorites, by M. A. Isakovich,
N. A. Roy

RUSSIAN, bk, Iskusstvennye Sputniki Zemli, No 2,
1958, pp 61 -

JPRS/DC-287

An Investigation of the Ionic Composition of the
Earth's Atmosphere With the Aid of Rockets and
Satellites, by V. G. Iosomin. UNCL.

RUSSIAN, per, Iakushtvennyye Sputniki Zemli,
No 2, 1959, pp 32-35. (papers presented at Moscow
Conference of CSAGI, Moscow, 1-9 Aug 1958).

AF 1231316

UB JPRS/DC-287

Sci - Geophys
Sep 59 59

SLF 61-1535
96,250

Abstracts from "Artificial Earth Satellites," 11 pp.
UNCL

RUSSIAN, per, Iskusstvennyye Sputniki Zemli, No 3,
1959, pp. 1-124.

NASA TT-F-8

Sci - Space Res
Apr 60

The Capture Problem in the Three-Body Restricted
Orbital Problem, by V. A. Yegorov, 16 pp.

RUSSIAN, per, *Izvestiya Akademii Nauk SSSR
No 3, Moscow, 1959, pp 3-12.*

NASA TT P-9

OTS 61-27217

FDD/X-3969

JPL A1/T-11-22

Sci-Space Research

May 60

115,799

Observations of a Satellite, by V. V. Belotskiy,
54 pp.

RUSSIAN, per, Izvestiya Sputniki Zemli,
No 3, Moscow, 1970, pp 13-31.

NASA TT F-10

Sci - Space Res

Jan 60

117,552

NASA TT F-45

National Aeronautics and Space Administration.
FIRST-ORDER PERTURBATIONS IN THE MOTION
OF EARTH SATELLITES DUE TO OBLATENESS OF
THE EARTH. V. I. Proskurin and Yu. V. Batrakov.
November 1960. 11p. OTS price, \$0.50.
(NASA TECHNICAL TRANSLATION F-45. Transla-
tion from *Iskusstvennyy Sputnik Zemli*, no. 3, 1959,
p. 32-38 (USSR))

An analytical theory is presented for artificial earth satellites, on the assumption that the oblateness of the planet is small enough so that the perturbation function in powers of the oblateness can be limited to the term containing only the first powers of the oblateness of the earth. This portion of the perturbation function is expanded in powers of the eccentricity. Integration of the ordinary Lagrange equations yields analytical expressions of the first-order perturbations relative to the oblateness of all of the elements of the orbit, accurate to the fourth degree of the eccentricity inclusive.

Copies obtainable from: NASA, Washington

- I. Proskurin, V. F.
- II. Batrakov, Yu. V.
- III. NASA TT F-45
- IV. *Iskusstvennyy Sputnik Zemli*, no. 3, 1959,
p. 32-38 (USSR)

(Initial NASA distribution:
6, Astronomy; 7, Astro-
physics; 16, Cosmochem-
istry; 17, Communications
and sensing equipment,
flight; 21, Geophysics and
geodesy; 30, Physics,
atomic and molecular;
31, Physics, nuclear and
particle; 33, Physics, theo-
retical; 46, Space mechan-
ics; 47, Satellites.)

152,304

SLA NASA 61-15118

NASA TT F-46

National Aeronautics and Space Administration.
 PERTURBATIONS OF ORBITS OF ARTIFICIAL
 SATELLITES DUE TO AIR RESISTANCE. Yu. V.
 Batrakov and V. F. Proskurin. November 1960.
 13p. OTS price, \$0.50.

(NASA TECHNICAL TRANSLATION F-46. Transla-
 tion from Iskusstvennyy Sputnik Zemli, no. 3, 1959,
 p. 39-47 (USSR))

65 77-63-24298 (16p)
 Presentation of a general form of the first-order per-
 turbations in the elements of an elliptic satellite orbit,
 caused by the resistance of the air, is undertaken.
 It was assumed that the earth's atmosphere has a fully
 spherical density distribution and that the attraction of
 the earth can be replaced by the attraction of the
 material point, placed at its center of inertia and
 having the same mass as the earth. These assump-
 tions, along with the secular perturbations, are used
 to obtain faster perturbations whose periods do not
 exceed the period of one rotation of the satellite.

Copies obtainable from NASA, Washington

- I. Batrakov, Yu. V.
- II. Proskurin, V. F.
- III. NASA TT F-46
- IV. Iskusstvennyy Sputnik Zemli, no. 3, 1959,
 p. 39-47 (USSR)

(Initial NASA distribution:
 6, Astronomy; 7, Astro-
 physics; 16, Cosmochem-
 istry; 17, Communications
 and sensing equipment,
 flight; 21, Geophysics and
 geodesy; 30, Physics,
 atomic and molecular;
 31, Physics, nuclear and
 particle; 33, Physics,
 theoretical; 46, Space
 mechanics; 47, Satellites.)

12-27-70
 NASA

Vakhnin, V. M. and Beletskii, V. V.
ON THE OBSERVATION OF THE ARTIFICIAL
SATELLITE BY THE EXPECTATION METHOD.
[12]p 1ref
Order from OTS, SLA, or ETC \$1.60 TT-64-16171

Trans. of [Iskusstvennye Sputniki Zemli] (USSR)
1959, v. 3, p. 47-53.
Another trans. is available from OTS, SLA, or ETC
\$1.60 as TT-64-11114 (10)p.

(Engineering--Satellite Vehicles, TT, v. 12, no. 4)

TT-64-16171

I. Vakhnin, V. M.
II. Beletskii, V. V.

Office of Technical Services

NASA TT F-48

National Aeronautics and Space Administration.

OBSERVATION OF AN ARTIFICIAL SATELLITE BY
THE EXPECTATION METHOD. V. M. Vakhnin and
V. V. Beletskiy. November 1960. 10p. OTS
price, \$0.50.

(NASA TECHNICAL TRANSLATION F-48. Transla-
tion from Iskusstvennyy Sputnik Zemli, no. 3, 1959,
p. 47-53 (USSR))

An expectation method is presented for predicting the
appearance of an artificial satellite within the obser-
vation range of the spotting equipment. For success-
ful application of the method, it is important to take
into account only one variable factor, namely, the
rate of orbit precession.

Copies obtainable from NASA, Washington

- I. Vakhnin, V. M.
- II. Beletskiy, V. V.
- III. NASA TT F-48
- IV. Iskusstvennyy Sputnik Zemli, no. 3, 1959,
p. 47-53 (USSR)

(Initial NASA distribution:
6, Astronomy; 7, Astro-
physics; 16, Cosmochem-
istry; 17, Communications
and sensing equipment,
flight; 21, Geophysics and
geodesy; 30, Physics,
atomic and molecular;
31, Physics, nuclear and
particle; 33, Physics,
theoretical; 46, Space
mechanics; 47, Satellites.)

NASA

NASA TT F-47

National Aeronautics and Space Administration.
DEPENDENCE OF SECULAR VARIATIONS OF ORBIT
ELEMENTS ON THE AIR RESISTANCE. P. E.

El'yasberg. November 1980. 10p. OTS price,
\$0.50. (NASA TECHNICAL TRANSLATION F-47.
Translation from *Iskusstvennyy Sputnik Zemli*, no. 3,
1959, p. 54-60 (USSR))

67-77-63-04275 (1211)
Presented is an extension of the idea, proposed by
I. M. Yatsunskiy, of expanding the secular variations
of the orbit elements in Bessel functions of imaginary
argument. This results in simple and illustrative
formulas which can be used to solve many problems,
such as determination of the dependence of the secular
variations of the orbit elements on the values of the
elements themselves, estimation of the accuracy of
determination of the air density from the measured
secular variations of the orbit elements, and so forth.

Copies obtainable from NASA, Washington

- I. El'yasberg, P. E.
- II. NASA TT F-47
- III. *Iskusstvennyy Sputnik Zemli*, no. 3, 1959,
p. 54-60 (USSR)

(Initial NASA distribution:
6, Astronomy; 7, Astro-
physics; 16, Cosmochemis-
try; 17, Communications
and sensing equipment,
flight; 21, Geophysics and
geodesy; 30, Physics,
atomic and molecular;
31, Physics, nuclear and
particle; 33, Physics, theo-
retical; 46, Space mechan-
ics; 47, Satellites.)

142,545
NASA

Puncture Problem at Cosmic Velocities, by
M. A. Lavrent'ev, 2 pp.

RUSSIAN, ^{bk}~~per~~, Iskusstvennye Sputniki Zemli,
No 3, 1959, pp 61-65.

ARS
Apr 60

ARSA

TT 40

Shklovskii, I. S. and Kurt, V. G.
DETERMINATION OF ATMOSPHERIC DENSITY AT
A HEIGHT OF 430 KM BY THE SODIUM VAPOUR
DIFFUSION METHOD (Opredelenie Plotnosti Atmosfery
na Vysote 430 KM Metodom Diffuzii Parov Natriya) tr.
by J. W. Palmer. May 60 [14p] 16refs RAE Library
Trans. no. 896.

Order from OTS, SLA, or ETC \$1.60 TT-63-24297

Trans. of Ikhoshtvennye Sputniki Zemli (USSR) 1959,
v. 3, p. 66-76.

Another trans. is available from OTS or SLA \$1.60 as
TT-60-21443, NASA TT-F-15, Apr 60, 13p.

DESCRIPTORS: *Upper atmosphere, Density,
Barometric pressure, Meteorological parameters,
Sodium, Vapors, Diffusion, High altitude, Rockets.

For abstract see Technical Translation 4: 214, 1960
(Earth Sciences--Atmosphere, TT, v. 11, no. 3)

TT-63-24297

- I. Shklovskii, I. S.
- II. Kurt, V. G.
- III. RAE Trans-896
- IV. Royal Aircraft
Establishment (Gt. Brit.)

Office of Technical Services

Some Results of the Determination of the
Structural Parameters of the Atmosphere
Using the Third Soviet Artificial Earth
Satellite, by V. V. Mikhnevich, B. S. Danilin,
A. I. Ropnov, V. A. Sokolov, 7 pp.

RUSSIAN, per, ~~Izvestiya~~ Sputniki Zemli,
No 3, 1959, pp 84-97.

NASA TT -13

ARS

Apr 60

115,536

Del
CTD, 144 - 270 TT-13-242-6 (19/60)

NASA TT F-53

National Aeronautics and Space Administration.
RADIO-FREQUENCY MASS SPECTROMETER FOR
THE INVESTIGATION OF THE IONIC COMPOSITION
OF THE UPPER ATMOSPHERE. V. G. Istomin.

January 1961. 21p. OTS price, \$0.75.
(NASA TECHNICAL TRANSLATION F-53. Transla-
tion from Iskusstvennyy Sputnik Zemli, no. 3, 1959,
p. 98-112 (USSR))

Described is the device by which data were obtained
on the mass spectrum of positive ions of the iono-
sphere at altitudes up to 885 km using Soviet high-
altitude rockets and the third Soviet artificial satellite.
Single-row type grids used in the ion-source unit and
in the analyzer, as well as other unique features, are
described in detail.

Copies obtainable from NASA, Washington

- I. Istomin, V. G.
- II. NASA TT F-53
- III. Iskusstvennyy Sputnik Zemli, no. 3, 1959,
p. 98-112 (USSR)

(Initial NASA distribution:
17, Communications and
sensing equipment, flight;
19, Electronics; 21, Geo-
physics and geodesy;
30, Physics, atomic and
molecular.)

137.842
FDD X-4926

NASA

Manometer Error Caused by Slight Blows in the
Shell of a Sputnik, by S. A. Kuchay
y.

RUSSIAN, zh, Izhvestiennyye Sputniki Zemli,
No 3, 1959, pp 113-117.

NASA TT 14

ITS 66-21472

Sci - Spec Res

132,276

Nov 60

The Determination of the Density of the Atmosphere
at an Altitude of 430 Kilometers by the Sodium Vapor
Diffusion Method, by I. S. Shklovskiy, V. G. Kurt.

bk

RUSSIAN, per, Izvestiynyye Spitski Zemi,
No 3, 1959, pp 66-76.

NASA TT 15

Sci - Spac Res

Nov 60

132,284

Methods of Combatting Interfering Currents That
Arise at the Input of an Electrostatic Fluxmeter
Operating in a Conducting Medium, by I. M.
Imyanitov, Ya. M. Shvarts, 4 pp.

RUSSIAN, per, Izvestiya Sputniki Zemli, No 3,
1959, pp 77-83.

Sci

ARS

Apr 60

NASA

115,534

IT 16

On the Problem of the Interaction Between a
Satellite and the Earth's Magnetic Field, by
Yu. V. Zolov, 11 pp.

RUSSIAN, per, *Izvestiya Spatsiki Zemli*,
No 3, Moscow, 1959, pp 118-124.

NASA TT F-37

Sci - Space Research

May 50

116,314

63-10312

Kislík, M. D.
THE MOTION OF THE ARTIFICIAL SATELLITE IN
A NORMAL GRAVITY FIELD OF THE EARTH.
[1962] [20]p. 6 refs.
Order from OTS or SLA \$1.60 63-10312

1. Kislík, M. D.

Trans. of Iskusstvennye Sputniki Zemli (USSR) 1960,
v. 4, p. 3-17.

Another trans. is available free from Land-Air as
LTS-6. When supply is exhausted, order from OTS or
SLA \$3.60 as 61-27018, 1 May 61 [32]p.

DESCRIPTORS: *Satellite vehicles, *Orbital flight
paths, Gravity, Earth, Motion.

For abstract see Technical Translations 6: 349, 1961.

(Engineering - Satellite Vehicles, TT, v. 10, no. 3)

Office of Technical Services

El'yasberg, P. E. and Yastrebov, V. D.
DETERMINATION OF UPPER-ATMOSPHERE DENSITY
FROM THE RESULTS OF THE OBSERVATIONS OF
SPUTNIK 3 (Opredeleniye Plotnosti Verkhnei Atmosfery
po Rezul'tatam Nablyudenii za Poletom Tret'ego Sovets-
kogo Iskusstvennogo Sputnika Zemli) tr. by J. W.
Palmer. Feb 61 [19p] refs RAE Library Trans.
no. 937; AD-258 609.
Order from OTS, SLA or ETC \$1.60 TT-63-24322

Trans. of Iskusstvennye Sputniki Zemli (USSR) 1960,
v. 4, p. 18-30.
Another trans. is available from OTS or SLA \$2.60 as
TT-61-27991, ARGMA Trans-16-61, 21 Jul 61 [23]p.
(Abstract available)

DESCRIPTORS: *Upper atmosphere, Density, Deter-
mination, *Atmospheric sounding, *Satellites
(Artificial), Orbital trajectories, Numerical analysis.
(Earth Sciences--Atmosphere, TT, v. 11, no. 2) (over)

TT-63-24322

- I. Title: Sputnik-3
- I. El'yasberg, P. E.
- II. Yastrebov, V. D.
- III. RAE Trans-937
- IV. AD-258 609
- V. Royal Aircraft Establish-
ment (Gt. Brit.)

Office of Technical Services